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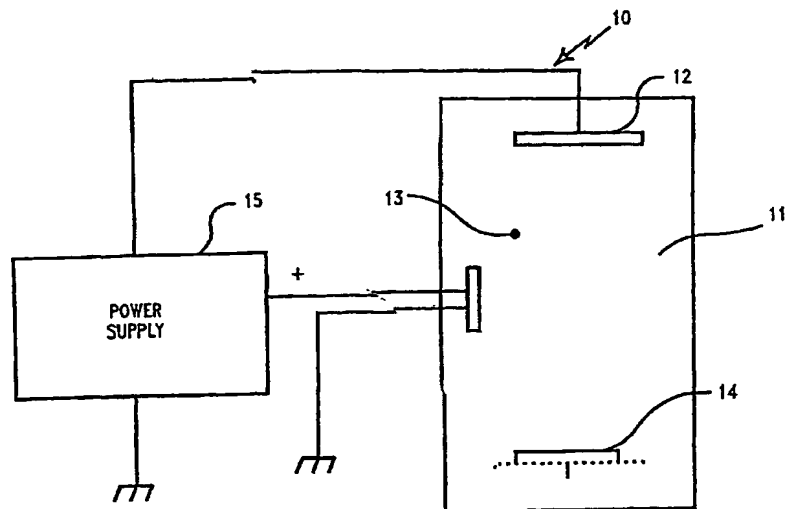
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: **SPUTTER TARGET MONITORING SYSTEM**



(57) Abstract: A sputtering target monitoring system (20) for monitoring the status of a sputtering source target (22) during the sputtering process. The collection of data is initiated based on measured voltages in the sputtering source target (22), whereas the arcing count is determined based on current spikes or interruptions to the current in the sputtering source target (22) during the sputtering process. The real time data collected during the sputtering process is recorded and displayed in table or graphical format at any time during the sputtering process. Thus, problems in the sputtering process, or in the sputtering source (22), including an approaching end of life of the target may be easily ascertained. Alarms, messages or other indicators may be used to alert operators to problems or conditions during the sputtering process.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/19740

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C23C 14/34

US CL : 204/192.13, 298.03, 298.08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 204/192.13, 298.03, 298.08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,110,328 A (SHIMIZU et al) 29 August 2000 (29.08.2000), Column 7 lines 19-24; Column 7 lines 55-68; Column 8 lines 1-19.	1-15
Y	US 5,993,615 A (ABRY et al) 30 November 1999 (30.09.1999), Abstract; Column 3 lines 13-36; Column 3 lines 49-68; Column 4 lines 1-34; Column 4 lines 42-47.	1-15
Y	US 5,698,082 A (TESCHNER et al) 16 December 1997 (16.12.1997), Abstract; Column 4 lines 47-50; Column 4 lines 56-61; Column 4 lines 62-68; Column 6 lines 10-40.	1-15
Y	US 4,166,783 A (TURNER) 04 September 1979 (04.09.1979), Abstract; Figure 1; Column 2 lines 51-65; Column 2 lines 66-68; Column 3 lines 1-10; Column 3 lines 39-50.	1-15



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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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